DOCUMENT RESUME

ED 173 306 SP 014 155

AUTHOR Pitzl, Gerald R.
TITLE Revitalizing Interdisciplinary Offerings.
PUB DATE 15 Nov 77
NOTE 11p.

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Core Curriculum; Course Content; *Curriculum Design; *Global Approach; *Higher Education; Individual Development; *Interdisciplinary Approach

ABSTRACT

It is argued in this paper that the interdisciplinary course provides a setting for viewing the ordered relationships that exist among disciplines. The necessity of this approach is pointed out as it reflects the need for a highly disarticulated curriculum to address and find solutions to the complex problems facing the world community. A justification of this view and the implementation of the premises it puts forth is presented as a desirable curriculum change in higher education. (JD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

#104

ED173306

REVITALIZING INTERDISCIPLINARY OFFERINGS

by

Gera'd R. Pitzl

Macalester College

A Journal Manuscript Submitted to the

American Association of Colleges of Teacher Education

November 15, 1977

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Gerald R. Pitzl

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

SP014155

ABSTRACT

Observers of higher education have been critical of current trends in curriculum resulting in increases in the number of courses offered and a lessening of emphasis on achieving integration of thought in a holistic way. This movement toward a more highly disarticulated curriculum comes at a time when the integrating approach of interdisciplinary programs and courses are most needed to address and find solutions to the complex problems facing the world community. This paradox is crucial in another sense. Studies show that individual students are more aware of the need for holistic approaches. They are, it seems, more willing to use the intellectual content of individual disciplines for the purpose of finding remedies to societal problems. Since these problems are exceedingly complex, the need for interdisciplinary approaches to adequately address them has increased. This paper addresses the need for the enhancement of interdisciplinary approaches.

REVITALIZING INTERDISCIPLINARY OFFERINGS

Curricular offerings in colleges and universities do not remain constant. Courses are frequently added or deleted to reflect the changing times in which we live. Even the so-called "bread and butter" courses that perennially appear in catalogues are regularly altered to take account of research outcomes and structural innovations within those disciplines. Indeed, continual assessment of curricular effectiveness and curricular modification, where necessary, is a challenge that all institutions of higher learning must meet.[1] The outcomes of curricular assessment and modification, however, have in recent years come under attack on two general fronts: 1) the reductionist trend within academic disciplines leading to what Alvin Toffler terms "overchoice"[2] in the number and variety of courses available, and 2) the inability of higher education to adequately respond in a holistic way to the intellectual needs of the individual student.

The problems of reductionism in curricular offerings and the incomplete intellectual development of the individual student are related. One aim of this paper is to bring this relationship clearly into view. Another is to propose what hopefully could be a partial solution -- the revitalization of the interdisciplinary course.

The Paradox of Interrelatedness and Reductionism

The observation in the Second Newman Report reminds us, perhaps unnecessarily, that nearly all colleges and universities see it as their mission to impart knowledge primarily in terms of academic disciplines. Further, to be diverse or comprehensive is to offer a wide range of disciplines.[3] Consequently the number of courses increases within each discipline in an effort to maintain currency and relevance. The effectiveness of this situation is being questioned.

Stanford political scientist Gabriel A. Almond is pointed in his response to the reductionist sweep across the curriculum in universities. While giving due credit particularly to the sciences for recent signal accomplishments, he suggests that

> ...universities have lost their capacities to orient students to a world which increasingly insists on being viewed whole with all of its interdependencies and moral dilemmas. Those who argue that only more and better science will enable us to confront these problems miss the point that this by itself will not be enough and only higher order philosophical syntheses can spell out the big issues and formulate alternative solutions.[4]

Implicit in this statement is the conclusion that complex problems will find solution only through the integrated efforts respresentative of many fields of learning. He goes on to suggest that necessary structural integration of curriculum can be provided only by the "synthesizing, codifying, speculative, and evaluative disciplines."[5] This is apparently meant to infer that only certain disciplines would be appropriate for interdisciplinary efforts. It is perhaps true that some disciplines would exhibit these characteristics more than others. Yet the primary advantage of the interdisciplinary course is the bringing together of diverse disciplines for the express purpose of synthesizing, codifying, speculating and evaluating topics which are beyond the scope of a single discipline.

Further, there is a growing awareness of the interdependence of all problems.[6] For example, in Japan the degree of environmental disturbance resulting from congestion of the Tokyo-Osaka urbanized corridor prompted a governmental program of decentralization and dispersal of industry to less densely populated regions. In order for this to proceed, large monetary outlays will be necessary to improve the social infrastructure (housing, transportation, sewage systems, water supplies) within the regions targeted for industrial growth. In turn, the rate of capital investment directly into industrial growth will decline relative to previous

high growth periods. Trade-offs in employment brought about by lower industrial growth rates and increases in infrastructural requirements will most likely add to the problem. The Japanese worker views the relationship with his employer as a lifetime commitment. To change jobs is a last resort measure. Because of this, major shifts between employment sectors may not be as easily accomplished as it would be in other societies. Resolution of complex problems such as this will require the integrated efforts of individuals from many fields of expertise.

The need for a truly integrated effort is paramount. The importance of this is vividly apparent when integration is not sought. The outcome of a recent symposium on the Alliance for Progress provides a candid example. At the conclusion of the symposium, as Yale H. Ferguson reports, it was apparent that participants had not been prepared to mutually address the problems at hand. Indeed, individual analysts seemed to be "speaking past each other" while presenting "incompatible or even mutually exclusive theoretical perspectives." The general drift of the sessions indicated "not merely a lack of communication, but outright paradigmatic competition."[7] The failure to gain meaningful synthesis stemmed mainly from the reluctance of individual scholars to realize the limitations of a unilateral disciplinary stance and to appreciate the insights to be gained from the views of others.

A pressing need exists, then, not only to recognize the interrelatedness of problems but to respond in a manner most conductive to gaining understanding and the ability to propose solutions. Robert Heilbroner, in his less than optimistic assessment of materialistic society, views the human prospect as a "formidable array of challenges that must be overcome before human survival is assured."[8] The challenges referred to are global in scale and unprecedented in complexity. Meeting these challenges and finding answers to them will require fully coordinated

intellectual thrusts toward understanding and resolution.

The Development of the Individual Student

It may well be that students are more aware than faculty of the need for integrated approaches in curricular content. The increased demand in recent years for interdisciplinary courses and majors is indicative of this and reflects, in large measure, student desires for more freedom in devising their individual programs.[9] Today's undergraduate is not comfortable with fully prescribed sets of courses and rigid major requirements. He is more attuned than were his predecessors to the need for a broad understanding of the world in which he lives. Evidence of this exists in the types of interdisciplinary majors currently offered at colleges and universities. Programs in International Relations, Urban Studies, Environmental Studies, and others, attest to student awareness of the need for collaborative approaches to augment strong disciplinary concentrations.

Admittedly, the development and sound maintenance of relevant interdisciplinary programs adds measurably to faculty workload. Advising within this area is a significant departure from that required for the more structured departmental major. Also, a more personalized form of advising is required in order to arrange a program that fits the personal talents and inclinations of the individual student.[10] Scheduling course times mutually agreeable to two, three or more instructors can be problematical. This is particularly true at schools where faculty involvement in committee and administrative work is already substantial.

Despite these difficulties, the effort can reap valuable returns. Richard I. Evans is correct in his assessment that the development of the individual student must be the most important aim of undergraduate education.[11] The larger intellectual view provided by interdisciplinary courses and the more personalized attention given to student development within these programs can contribute toward the fulfillment of this aim.

Revitalizing Interdisciplinary Programs

To complete an interdisciplinary major, the student builds a core concentration in one discipline and supplements this with supporting courses drawn from a wide array of related areas. In some programs a senior seminar is included as a "culminating" experience. Although these programs are undoubtedly a step in the right direction, they do not provide a great enough degree of coherence in one crucial respect -- they are simply not interdisciplinary in the truest sense of the word. First, they depart only minimally from the traditional single discipline major with its supporting course requirement of minor or core. Second and most important, the availability of interdisciplinary courses within each program is irregular. Such courses may or may not be available during a given academic year. Such haphazard scheduling of the interdisciplinary course diminishes the effectiveness of the interdisciplinary major.

It is not surprising therefore that both students and faculty look somewhat tentatively on the merit of the interdisciplinary major. Not uncommonly students complete a departmental major in addition to an interdisciplinary program in order to be "on the safe side" for graduate school application. In short, interdisciplinary programs occupy a somewhat lower ranking among curricular majors. There is an unmistakable irony in this situation for it is the interdisciplinary course that can best address the complex problems faced by the world community today. As Michael Novak suggests, it is interdisciplinary work that reflects a "serious desire to treat problems from more than one viewpoint in order to respect their wholeness."[12] In order to become more effective, it follows that interdisciplinary programs must be oriented toward a more holistic intellectual experience. Accomplishment of this aim can be brought about by the inclusion of validly interdisciplinary courses within each program.

The building blocks for such courses are found within the individual disciplines. Arthur Bestor's thoughts in this regard are informative:

> The great intellectual disciplines are not mere collections of facts and formulas, but ways of thinking with organized structures of their own. The learning of facts is not intellectual training, unless those facts are seen as the conclusions of systematic inquiry and as part of a larger structure of knowledge. Reorganizations of the curriculum are destructive if they cause the students to lose sight of the ordered relationships that exist, and of the methods of investigation that are employed, within each of the basic fields of knowledge.[13]

The interdisciplinary course, in turn, provides a setting for viewing the ordered relationships that exist among disciplines. It provides an opportunity for the interfacing of conceptual structure -- or, more simply stated, a chance to share in understanding and problem solving. It makes possible the application of a higher degree of integrated and holistic thought to the problems being analyzed.

Workable structures for interdisciplinary courses have been developed. Michael A. McDaniel's model for diachronic study of cultural systems is a case in point.[14] Within this model, cultural system change is analyzed with reference to a set of "change factors" each of which would require inputs from particular academic disciplines.* The factor, for instance, entitled "social innovation" includes changes in economic systems, political structures, education systems, and leadership styles as they impact on overall cultural change.

The need for interdisciplinary frameworks is clear in this form of analysis. A representative of a single discipline will have neither the breadth of conceptual

---

* The change factors in this model are titled Demographic, Technological, Social Innovation, Cultural Diffusion, Ecological, Information-Idea Shifts, and Culture-Value Shifts. The conceptual level of these generalized topics emphatically requires an interdisciplinary approach.

understanding that a well structured team would have nor will he be capable of presenting more than his own insights. This is one of the shortfalls of the disarticulated curriculum -- the probability of deriving concepts, models, and theories in range and scope sufficient to match the complexity of the prob'ems addressed is significantly limited.

Within the interdisciplinary setting, however, the team can consider a variety of concepts and approaches to determine, as Ferguson suggests, "what each purports to do, how well it does it, and especially what each fails to do."[15] The opportunity for more comprehensive understanding of the problems under consideration is greatly enlarged and the way is made clearer for the proposal of appropriate solutions.

The ultimate success of interdisciplinary courses rests strongly on the degree of openness exhibited by faculty and student alike. Individuals bring their own perspective and expertise to bear on problems being addressed in concert. Each contributes to a greater or lesser degree in the outcome. Michael Novak's personal reference is instructive:

> I like best situations in which I have one voice among many -- in which other views besides my own are clearly argued. It makes me nervous when consensus seems to accept my views as 'true.' Part of the truth, yes; a useful perspective, perhaps; even, occasionally, a better presentation than any alternative...I know in advance -- it is a privilege that goes with being part of a minority -- that my view is partial.[16]

Partiality of view is a limitation shared by all individuals. In the academic realm, it is this factor which prohibits individual disciplines from coping fully with the complex problems. The interdisciplinary course, on the other hand, provides a setting for the enlargement of view, the emergence of wider perspective, and the development of a community of scholarship that transcends the limitations of the individuals taking part.

NOTES

1. Allan O. Pfnister, Planning for Higher Education: Background and Application (Boulder, Colorado: Westview Press, 1976), p. 245.

2. Michael A. McDaniel, "Tomorrow's Curriculum Today," in Alvin Toffler, Learning for Tomorrow: The Role of the Future in Education (New York: Random House, 1972), pp. 103-131, p. 105.

3. The Second Newman Report: National Policy and Higher Education. Report of a Special Task Force to the Secretary of Health, Education, and Welfare (Cambridge, Massachusetts: The MIT Press, 1973), p. 40.

4. Gabriel A. Almond, "Some Reflections on the Crisis of the University Curriculum," Daedalus -- American Higher Education: Toward an Uncertain Future (Fall 1974), pp. 186-187, p. 187.

5. Ibid.

6. Michael Novak, "The One and the Many," Daedalus -- American Higher Education: Toward an Uncertain Future (Fall 1974), pp. 203-211, p. 205.

7. Yale H. Ferguson, "Through Glasses Darkly: An Assessment of Various Theoretical Approaches to International Relations," Journal of Interamerican Studies and World Affairs (Vol. 19, February 1977), pp. 3-34, p. 29. Ferguson's review summarizes the introduction to Julio Cotler and Richard R. Fagan, eds., Latin America and the United States: The Changing Political Realities (Stanford, California: Stanford University Press, 1974), pp. 1-20.

8. Robert L. Heilbroner, An Inquiry Into the Human Prospect (New York: W. W. Norton & Company, Inc., 1974), p. 138.

9. Howard E. Mitzel, "The Impending Instruction Revolution," in Richard W. Hostrop, ed., Foundations of Futurology in Education (Homewood, Illinois: ETC Publications, 1973), pp. 229-246, p. 245.

10. Alexander M. Mood, The Future of Higher Education: Some Speculations and Suggestions (New York: McGraw-Hill Book Company, 1973), p. 32.

11. Richard I. Evans, Resistance to Innovation in Higher Education: A Social Psychological Exploration Focused on Television and the Establishment (San Francisco: Jossey-Bass Inc., Publishers, 1968), p. xiii.

12. Novak, op. cit., p. 205.

13. Arthur Bestor, "The Restoration of Learning," in James Wm. Noll and Sam P. Kelly, Foundations of Education in America: An Anthology of Major Thoughts and Significant Actions (New York: Harper & Row, Publishers, 1970), p. 369.

14. McDaniel, op. cit., p. 114.

15. Ferguson, op. cit., p. 5.

16. Novak, op. cit., p. 204.